

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
GE American Communications, Inc.)	
)	IBFS: SAT-MOD-19971222-00202
Application for Modification of)	File No. 38-SAT-MP/ML-98
Authorization to Construct, Launch and)	Call Sign: S2180
Operate a Ka-Band Satellite Service in the)	
Fixed Satellite Service)	
)	

MEMORANDUM OPINION AND ORDER

Adopted: August 2, 2001

Released: August 3, 2001

By the Chief, International Bureau:

I. INTRODUCTION

1. By this Order we dismiss, without prejudice, GE American Communications, Inc.'s ("GE Americom") application to modify its authorization to operate a Ka-band satellite system.¹ GE Americom is authorized to construct, launch and operate GE*Star, a geostationary satellite orbit ("GSO") system, to provide fixed-satellite ("FSS") services. GE Americom seeks authority to expand GE*Star's authorized operations into spectrum designated for primary non-geostationary satellite ("NGSO") FSS use. GE Americom, however, did not submit a technical demonstration that it can operate in these NGSO bands on a non-harmful interference basis, as required by the Ka-band service rules. Consequently, we dismiss the application, without prejudice. GE Americom may refile the application along with the requisite technical information.

II. BACKGROUND

2. In 1996, the Commission developed a band segmentation plan for the 28 GHz band designed to accommodate both terrestrial and satellite communication systems.² This plan designates discrete spectrum bands for specific types of systems, including Local Multipoint Distribution Service providers, FSS, and feeder links for certain Mobile Satellite Service systems.³ Under this plan, certain

¹ The terms "Ka-band" or "28 GHz band" generally refer to the space-to-Earth (downlink) frequencies at 17.7-20.2 GHz and the corresponding Earth-to-space (uplink) frequencies at 27.5-30.0 GHz.

² Rulemaking to Amend Parts 1, 2, 21 and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services, *First Report and Order and Fourth Notice of Proposed Rulemaking*, 11 FCC Rcd 19005 (1996) ("28 GHz Band Plan").

³ 28 GHz Band Plan, 11 FCC Rcd at 19007.

FSS systems have priority with respect to other FSS systems. In the 28.6-29.1 GHz segment, for example, NGSO FSS systems have operating priority over GSO FSS systems. Likewise, in the 28.35-28.6 GHz and 29.5-30.0 GHz band segments, GSO FSS systems have operating priority over NGSO FSS systems. System providers without priority must operate on an unprotected, non-harmful interference basis to the systems or services having priority.⁴

3. In May 1997, we authorized GE Americom to construct, launch and operate a GSO FSS system in the Ka-band.⁵ The proposed system is composed of nine GSO FSS satellites in five orbital locations.⁶ The GE*Star system is authorized to operate service uplinks in the 28.35-28.6 GHz and 29.25-30.0 GHz bands and service downlinks in the 19.7-20.2 GHz bands.⁷ These bands are designated for primary GSO FSS services.

4. In December 1997, as part of the second Ka-band processing round, GE Americom filed an application to modify its licensed first round system. GE Americom seeks authority to operate its system in the 18.8-19.3 GHz and 28.6-29.1 GHz frequency bands, in addition to its currently authorized frequencies. The proposed bands are designed for primary NGSO use. GE Americom claims that use of these additional frequencies will enhance its ability to provide high-quality service, increase the capacity of its system, and make services more cost effective.⁸ In support of its application, GE Americom states that since the *28 GHz Band Plan* was adopted, new frequency sharing methods between NGSO and GSO systems have been proposed, and provisional limits for NGSO sharing in GSO spectrum adopted.⁹ GE Americom asserts that with the development of sharing methods for NGSO spacecraft to operate in GSO spectrum, principles of efficient spectrum utilization require that sharing methods be applied in spectrum

⁴ *Rulemaking to Amend Parts 1, 2, 21 and 25 of the Commission's Rules to Redesignate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and Fixed Satellite Services, Third Report and Order*, 12 FCC Rcd 22310, 22326 (1997) ("Ka-Band Service Rules"), *Memorandum Opinion and Order*, FCC 01-172 (rel. May 25, 2001) (order on petition for clarification or reconsideration). Stations operating in primary services are protected against interference from stations of "secondary" services. Stations operating in the secondary service cannot cause harmful interference to or claim protection from harmful interference from stations of a primary service. "Co-Primary" services have equal rights to operate in particular frequencies. See 47 C.F.R. § 2.104(d) and 2.105(c); *Ka-Band Service Rules*, 12 FCC Rcd at 22325.

⁵ GE American Communications, Inc., Application for Authority to Construct, Launch and Operate a Ka-band Satellite System in the Fixed Satellite Service, *Order and Authorization*, 12 FCC Rcd 6475 (Int'l Bur. 1997).

⁶ 17° W.L., 85° W.L., 105° W.L., 56° E.L., and 114.5° E.L.

⁷ In January 2001, we modified GE Americom's license to allow it to operate inter-satellite links ("ISL's") and to specify additional downlink operating frequencies. GE Americom is authorized to conduct ISL operations on 1500 megahertz of spectrum in the 54.25-55.0 GHz, 55.25-55.5 GHz, 57.0-57.25 GHz and 57.8-58.20 GHz. In addition, consistent with the Commission's revised plan for downlink spectrum, GE Americom was authorized to operate on 500 megahertz in the 18.3-18.8 GHz bands for its service downlinks. See GE American Communications, Inc., Application for Authority to Construct, Launch, and Operate a Ka-band Satellite System in the Fixed-Satellite Service, *Order and Authorization*, DA 01-225 (rel. January 31, 2000).

⁸ Application by GE American Communications, Inc. for Modification of Authority to Construct, Launch and Operate a Ka-Band Satellite System in the Fixed Satellite Service, File No. SAT-MOD-19971222-00202, Filed December 22, 1997 ("GE Americom Modification Application").

⁹ *GE Americom Modification Application* at 3. GE refers to the 1997 World Radiocommunication Conference ("WRC") which adopted provisional power flux density ("pfd") limits to allow NGSO systems to operate in GSO primary spectrum. At WRC 2000, final pfd limits were approved for both the Ka-and Ku-bands, however the Commission has not adopted these provisions for the Ka-band. See Final Acts World Radiocommunication Conference (Istanbul, 2000), Partial Revision of the Radio Regulation, Article S22. The WRC rules, however, did not address how GSO systems may operate on a secondary basis with respect to NGSO systems as GE proposes.

designated for primary NGSO system use as well.¹⁰ In the event NGSO/GSO sharing is permitted, GE Americom seeks authority to operate in the NGSO FSS spectrum. Accordingly, its request is conditioned on the development of sharing techniques. GE Americom states it will submit technical data about its operations in the NGSO bands once additional information about sharing is available.¹¹

5. Teledesic, LLC, (“Teledesic”), an NGSO licensee, filed a Petition to Deny GE Americom’s application. Teledesic states that GE Americom’s application seeks to use the NGSO spectrum on a primary, rather than secondary basis, in contravention of the *28 GHz Band Plan* and *Ka-Band Service Rules*.¹² In addition, Hughes Communications Galaxy, Inc. and Hughes Communications, Inc. (“Hughes”) filed consolidated Petitions to Dismiss or Deny against several second round Ka-band applications, including GE Americom.¹³ Hughes asserts that although GE Americom’s request is conditioned on the development of sharing techniques by GSO and NGSO satellite systems, the Commission’s rules provide for GSO use of the requested bands only on a secondary non-interference basis. Because GE Americom did not demonstrate that it can operate on a secondary, non-interference basis to NGSO systems, Hughes states that the modification application should be denied.¹⁴

III. DISCUSSION

6. In the *28 GHz Band Plan*, the Commission concluded that co-frequency sharing between GSO and NGSO systems was not possible and therefore adopted a plan designating different parts of the band for primary NGSO and GSO operations.¹⁵ The Commission has designated the 18.8-19.3 GHz and 28.6-29.1 GHz portions of the band for NGSO FSS satellite operations, on a primary basis. GE Americom seeks authority to operate a GSO system in these bands. The Commission designated GSO systems “secondary” users in these bands, and as such, directed them not to cause harmful interference to NGSO systems.¹⁶ Further, they cannot cause harmful interference to or claim protection from harmful interference of NGSO systems.¹⁷

7. Although GE Americom states its request is conditioned on the development of sharing techniques, its application is subject to current Commission rules. These rules require secondary operators to file a technical demonstration that they can operate on a non-harmful interference basis to the systems with operating priority.¹⁸ This demonstration is subject to public comment before any secondary GSO system operations will be authorized in the NGSO designated band.¹⁹ In this regard, GE Americom did not submit a technical showing, but represented that technical data would be provided when additional information about sharing possibilities is available.²⁰ Absent a technical showing as required by the *Ka-Band Service Rules*, the Commission is not in a position to act on GE Americom’s request.

¹⁰ *GE Americom Modification Application* at 3.

¹¹ *GE Americom Modification Application* at 4.

¹² Teledesic LLC, Petition to Deny filed May 21, 1999, at 2.

¹³ Consolidated Petitions to Dismiss, Deny or Defer of Hughes Communications Galaxy, Inc., and Hughes Communications, Inc., filed May 21, 1999 (“*Hughes Consolidated Petition*”).

¹⁴ *Id.* at 16.

¹⁵ *28 GHz Band Plan*, 11 FCC Rcd at 11930.

¹⁶ *Ka-Band Service Rules*, 12 FCC Rcd at 22327.

¹⁷ *Id.*

¹⁸ *Ka-Band Service Rules*, 12 FCC Rcd at 22326.

¹⁹ *Ka-Band Service Rules*, 12 FCC Rcd at 22326.

²⁰ *GE Americom Modification Application* at 4.

Consequently, we dismiss GE Americom's application without prejudice. GE Americom may refile when it is able to demonstrate that it can operate its GSO FSS system without interfering with NGSO FSS operations in the 18.8-19.3 GHz and 28.6-29.1 GHz frequency bands.

IV. CONCLUSION

8. Based on the foregoing, we dismiss, without prejudice, the application of GE Americom to modify its Ka-band authorization.

V. ORDERING CLAUSE

9. Accordingly, IT IS ORDERED, that the application of GE American Communications, Inc. for Modification of Authority to Construct, Launch and Operate a Ka-Band Satellite System in the Fixed Satellite Service, File No. SAT-MOD-19971222-00202, is DISMISSED without prejudice.

10. This Order is issued pursuant to Section 0.261 of the Commission's rules, 47 C.F.R. § 0.261, and is effective upon release.

FEDERAL COMMUNICATIONS COMMISSION

Donald Abelson
Chief, International Bureau